

May 28, 1958

Dear Herman:

Very interesting! It is more important than ever that we should transduce  $\text{Gal}_9^-$  into a constitutive-lactase mutant, to see if the epimerase block also prevents the formation of the presumed powerful internal inducer in the constitutive strain.

But there are some other odd features about your figures, though I have to try to translate from your arbitrary galactosidase units into units I am more familiar with. Can you just tell me what the relative activity of W-3100 would be if grown on lactose?

I would not suppose this would be very much higher than you get with galactose. If so, then  $\text{Gal}_6^-$  becomes a full-fledged lactase-constitutive (i.e. you get 4500 units on just glycerol). Of course we have other lactase-constitutives which are not galactose-negative. When we get the  $\text{Gal}_9^-$  combination, we will send you the  $\text{Gal}^+$  original for comparison, of course.

We have been somewhat preoccupied with developing methods for mapping the order of the different Gal genes. We have considerable encouragement on this point, and hope to be able to see, in due course, whether the kinase and transferase cistrons fall into two distinct mapping intervals, and where, in relation to them we will find  $\text{Gal}_3$ ,  $\text{Gal}_9$  etc.

Keep in touch.

Yours,

